



# Hindusthan College of Engineering and Technology

An Autonomous Institution Affiliated to Anna University | Approved by AICTE, New Delhi  
Accredited with 'A' Grade by NAAC | Accredited by NBA (ECE, MECH, EEE, IT & CSE)  
Valley Campus, Pollachi Highway, Coimbatore 641 032. | www.hicet.ac.in




## DEPARTMENT OF ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING 22AI4201- Database Management Systems CASE STUDY QUESTIONS

Register No.	Question
720722115001	Register.it relies on MySQL to host mission critical Linux and Windows platforms
720722115002	Transactions and Data Management in NoSQL Cloud Databases
720722115003	Shinsei Bank Relies on MySQL and SugarCRM to Radically Accelerate Enterprise Application Deployment
720722115004	Transaction Processing and Management Reporting Systems
720722115005	Toss Bank Delivers Innovative Financial Services with MySQL Enterprise Edition
720722115006	DB2 Universal Database: A Case Study of a Successful User-Centered Design Program
720722115007	Digital14 Relies on MySQL Enterprise Edition for Enhanced Security
720722115008	Performance Evaluation of NoSQL Databases
720722115009	ST Engineering's Smart Mobility Rail Business uses MySQL Enterprise Edition
720722115010	Transitioning From Relational to Nosql
720722115011	GCI achieves carrier-grade uptime and slashes IT costs with MySQL Enterprise Edition
720722115012	Traditional RDBMS and nosql database system
720722115013	The BBC Ensures World Class Broadcasting Services using MySQL Enterprise Edition
720722115014	A Case Study of NoSQL Adoption: What Drove Wordnik Non-Relational?
720722115015	Meritz Fire Powers Groupware Portal for Improved Collaboration and Cuts TCO with MySQL
720722115016	Itaú Unibanco Boosts Digital Platform with MySQL Enterprise Edition for High Availability and Support
720722115017	SSG Builds Online Shopping Mall using MySQL Enterprise Edition
720722115018	KDDI prevents service downtime with MySQL InnoDB Cluster and reduces failure recovery time by 80%
720722115019	BSE Takes Online Trading from Milliseconds to Microseconds with MySQL Enterprise Edition
720722115020	TMON Builds Korea's Number One Online Malling Platform on MySQL Enterprise Edition
720722115021	Flash Networks Embeds MySQL Enterprise Edition in Parental Control Solution for Mobile Operators
720722115022	Globo Adopts MySQL Enterprise Edition as Platform for Content Development

720722115023	K Bank Delivers High-Quality Customer Services While Reducing TCO by 80% MySQL Enterprise Edition
720722115024	NJ India Invest Boosts Financial Transaction Processing with MySQL Enterprise Edition
720722115025	Credorax Delivers NextGen Payment Processing Technology using MySQL
720722115026	WealthObjects Relies on MySQL to Deliver Innovative FinTech Solutions
720722115027	Sharecat Enables Oil and Gas Supply Chain Management with MySQL Enterprise Edition
720722115028	Zyme Relies on MySQL Enterprise Edition to Deliver High Quality Global Channel Insights to Customers
720722115029	Gina Tricot Scales Online Sales with MySQL Enterprise Edition
720722115030	Atos Manages Transaction Clearing for the Euronext Markets in Continental Europe with MySQL Enterprise Edition
720722115031	The Phone House Consolidates its eCommerce Systems on MySQL Enterprise
720722115032	Adresseavisen, Leading News Site in Norway, relies on MySQL Enterprise
720722115033	MySQL Enterprise powers 2 Million Referrals in Central Hospital Registry
720722115034	Promovacances.com boosts its performance with MySQL Enterprise & the Query Analyzer
720722115035	UCR Selects MySQL Enterprise to Power the Medical Registries of 1.5 Million Patients
720722115036	MySQL Enterprise powers SaaS ERP for Italian local and central authorities
720722115037	MySQL Enterprise Powers the Øresund Bridge – Processes Daily Traffic Data from 30,000 Vehicles
720722115038	be2 scales fast growing matchmaking web site with MySQL Enterprise
720722115039	Caspur relies on MySQL Enterprise to support its scientific research
720722115040	TweetMeme Manages Explosive Growth with MySQL Enterprise
720722115042	Sweden's largest student database, Ladok, to be powered by MySQL Enterprise
720722115043	MySQL Enterprise Brings High-Availability and Reliability to Advanced E-Learning System
720722115044	Aftonbladet, Sweden's largest news group, bets on MySQL
720722115045	Big Fish Games Triples Database Performance with MySQL Query Analyzer
720722115046	Logicworks Delivers Managed Database Hosting Service with MySQL Enterprise
720722115047	applele uses geometry type of MySQL to create a website using location information
720722115048	YamaReco implemented a map search function for hiking records, using the GIS feature of MySQL
720722115049	France Billet Stakes Online TicketSales on High Availability of MySQL Enterprise Edition
720722115050	Certigna Gains Maximum Availability Through Enhance Performance of MySQL Cluster Carrier Grade Edition
720722115051	IoT based Big Data System for Chungo-Nais With MySQL
720722115052	Adzuna Relies on MySQL to Support Explosive Growth

720722115053	Verizon Wireless Supports its Mission-Critical Employee Portal with MySQL
720722115054	Waiting Room Solutions Relies on MySQL for Web-Based Medical Management Systems
720722115055	iStockphoto Grows to a Top-100 U.S. Website with MySQL Enterprise Unlimited
720722115056	Zappos Uses MySQL to Power its Growth & Exceptional Customer Service
720722115058	Gumtree Relies on MySQL Enterprise to Help Tame Explosive Growth
720722115059	Deal Group Media scales out online advertising with MySQL
720722115060	Jajja Communications Optimizes Search Engine Traffic with MySQL Network Local County Government Turns to MySQL to Help Support its Citizens
720722115062	MySQL Enterprise Powers the Øresund Bridge – Processes Daily Traffic Data from 30,000 Vehicles
720722115063	Gina Tricot Scales Online Sales with MySQL Enterprise Edition
720722115601	Big Fish Games Triples Database Performance with MySQL Query Analyzer
720722115801	Adzuna Relies on MySQL to Support Explosive Growth
720722115802	Deal Group Media scales out online advertising with MySQL
720722115803	IoT based Big Data System for Chungho-Nais With MySQL
720722115804	Appleple uses geometry type of MySQL to create a website using location information

  
**Department of Artificial Intelligence  
and Machine Learning**  
Hindusthan College of Engineering and Technology  
Coimbatore - 641 032.

# **Case Study Report Title: Shinsei Bank Relies on MySQL and SugarCRM to Radically Accelerate Enterprise Application Deployment**

**Submitted by:**

**Roll Number:** 720722115003

**Department:** AIML

**Year:** Second Year

**Course:** 22AI4201- Database Management Systems

---

## **1. Introduction**

Shinsei Bank, a leading financial institution in Japan, faced a significant challenge in streamlining its enterprise application deployment. To achieve this, the bank decided to adopt an innovative approach by leveraging open-source technologies such as MySQL and SugarCRM. This case study explores how Shinsei Bank implemented these tools to accelerate application deployment, reduce costs, and improve customer service.

## **2. Background of Shinsei Bank**

Shinsei Bank was established in 2000 as a result of restructuring the former Long-Term Credit Bank of Japan. The bank aimed to modernize its operations, enhance customer experience, and reduce dependency on traditional proprietary systems.

Key challenges faced by Shinsei Bank included:

- High operational costs due to legacy systems
- Slow application deployment
- The need for a more flexible and scalable system

## **3. Technologies Adopted**

Shinsei Bank adopted two key open-source technologies to achieve its goals:

**3.1. MySQL** MySQL is a popular open-source relational database management system (RDBMS). It provides high performance, scalability, and reliability for enterprise applications.

Key features of MySQL:

- Open-source and cost-effective
- Supports a wide range of platforms
- High performance and scalability

**3.2. SugarCRM** SugarCRM is a customer relationship management (CRM) platform that helps organizations manage customer interactions, sales, and marketing campaigns.

Key features of SugarCRM:

- Open-source and highly customizable
- Provides a user-friendly interface
- Supports integration with other systems

## **4. Implementation Process**

The implementation process involved several stages:

### **4.1. Planning**

Shinsei Bank began by analyzing its existing infrastructure and identifying areas that required improvement. The bank's IT team worked closely with vendors and consultants to develop a deployment strategy.

### **4.2. Migration to MySQL**

The bank migrated its legacy database systems to MySQL. This migration involved data transfer, schema adjustments, and performance tuning to ensure a seamless transition.

### **4.3. Deployment of SugarCRM**

Shinsei Bank implemented SugarCRM to enhance its customer management processes. The CRM system was customized to meet the bank's specific requirements, including multilingual support and integration with existing systems.

## **5. Benefits Achieved**

By adopting MySQL and SugarCRM, Shinsei Bank achieved several significant benefits:

### **5.1. Cost Savings**

The bank reduced its IT infrastructure costs by replacing proprietary systems with open-source solutions.

### **5.2. Faster Application Deployment**

Shinsei Bank accelerated the deployment of new applications, enabling the bank to respond quickly to market changes and customer needs.

### **5.3. Improved Customer Service**

With the implementation of SugarCRM, Shinsei Bank enhanced its customer relationship management, resulting in better customer satisfaction.

### **5.4. Scalability and Flexibility**

The open-source technologies provided the bank with a scalable and flexible infrastructure that could easily adapt to future requirements.

## **6. Challenges Faced**

During the implementation process, Shinsei Bank encountered several challenges:

- Data migration complexities
- Customization requirements for SugarCRM
- Training employees to use the new systems


## **7. Conclusion**

The case study of Shinsei Bank demonstrates the potential of open-source technologies like MySQL and SugarCRM in transforming enterprise application deployment. By leveraging these tools, the bank

achieved significant cost savings, improved customer service, and enhanced operational efficiency. This case study highlights the importance of adopting innovative solutions to stay competitive in the rapidly evolving financial sector.

## 8. References

1. Shinsei Bank Official Website: [www.shinseibank.com](http://www.shinseibank.com)
2. MySQL Documentation: [www.mysql.com](http://www.mysql.com)
3. SugarCRM Documentation: [www.sugarcrm.com](http://www.sugarcrm.com)
4. Open Source Case Studies in Banking and Finance



Department of Artificial Intelligence  
and Machine Learning  
Hindusthan College of Engineering and Technology  
Coimbatore - 641 032.

# **Case Study Report Title: ST Engineering's Smart Mobility Rail Business Uses MySQL Enterprise Edition**

**Roll Number:** 720722115009

**Department:** AIML

**Year:** Second Year

**Course:** 22AI4201- Database Management Systems

## **1. Introduction**

ST Engineering, a global technology and engineering group, has been at the forefront of developing smart mobility solutions for rail systems. To enhance its Smart Mobility Rail Business, the company adopted MySQL Enterprise Edition to ensure high performance, reliability, and security in its database management system. This case study explores how ST Engineering utilized MySQL Enterprise Edition to improve operational efficiency and streamline its rail business operations.

## **2. Background of ST Engineering**

ST Engineering is headquartered in Singapore and operates in various sectors, including aerospace, electronics, land systems, and marine. The Smart Mobility Rail Business is a key part of its electronics division, providing advanced rail solutions to enhance commuter experiences and improve rail network efficiency.

Key challenges faced by ST Engineering included:

- Managing large volumes of data from rail systems
- Ensuring real-time data availability and accuracy
- Maintaining high levels of security and performance

## **3. Technology Adopted: MySQL Enterprise Edition**

MySQL Enterprise Edition is a comprehensive, commercial-grade version of MySQL that provides advanced features for enterprise applications.

Key features of MySQL Enterprise Edition:

- Advanced security features to protect sensitive data
- High availability with replication and backup solutions
- Real-time performance monitoring and tuning
- Scalability to handle large datasets

## **4. Implementation Process**

The implementation of MySQL Enterprise Edition in ST Engineering's Smart Mobility Rail Business involved several stages:

### **4.1. Planning and Analysis**

ST Engineering conducted a thorough analysis of its existing database infrastructure and identified areas for improvement. The company aimed to achieve real-time data processing and enhance system reliability.

## **4.2. Migration to MySQL Enterprise Edition**

The migration process involved transferring data from legacy systems to MySQL Enterprise Edition. This process required careful planning to minimize downtime and ensure data integrity.

## **4.3. Integration with Rail Systems**

ST Engineering integrated MySQL Enterprise Edition with various rail systems, including signaling, ticketing, and passenger information systems. This integration enabled real-time data updates and improved decision-making capabilities.

## **5. Benefits Achieved**

By adopting MySQL Enterprise Edition, ST Engineering's Smart Mobility Rail Business achieved several significant benefits:

### **5.1. Enhanced Performance and Reliability**

MySQL Enterprise Edition provided high availability and real-time data processing, ensuring that critical rail systems operated smoothly without interruptions.

### **5.2. Improved Data Security**

The advanced security features of MySQL Enterprise Edition helped protect sensitive rail system data from cyber threats and unauthorized access.

### **5.3. Scalability and Flexibility**

The solution offered scalability to accommodate growing data volumes from rail systems and the flexibility to adapt to changing business requirements.

### **5.4. Cost Savings**

By utilizing a commercial open-source solution, ST Engineering reduced its overall database management costs while maintaining enterprise-grade performance.

## **6. Challenges Faced**

During the implementation process, ST Engineering encountered several challenges:


- Data migration complexities
- Ensuring compatibility with existing rail systems
- Training staff to manage and maintain the new database system

## 7. Conclusion

The case study of ST Engineering's Smart Mobility Rail Business demonstrates the effectiveness of MySQL Enterprise Edition in managing large-scale, real-time data operations. By leveraging this advanced database solution, ST Engineering enhanced the performance, security, and scalability of its rail systems, contributing to a more efficient and reliable transportation network.

## 8. References

1. ST Engineering Official Website: [www.stengg.com](http://www.stengg.com)
2. MySQL Documentation: [www.mysql.com](http://www.mysql.com)
3. Case Studies in Smart Mobility and Database Management

  
Department of Artificial Intelligence  
and Machine Learning  
Hindusthan College of Engineering and Technology  
Coimbatore - 641 032.

# Case Study Report Title: Globo Adopts MySQL Enterprise Edition as Platform for Content Development

**Roll Number:** 720722115022

**Department:** AIML

**Year:** Second Year

**Course:** 22AI4201- Database Management Systems

---

## 1. Introduction

Globo, a major media conglomerate based in Brazil, has been leading the way in content development and broadcasting. To support its extensive content creation and distribution needs, Globo adopted MySQL Enterprise Edition to ensure scalability, reliability, and performance. This case study explores how Globo utilized MySQL Enterprise Edition to optimize its content development platform and meet the growing demands of its audience.

## 2. Background of Globo

Globo is one of the largest media companies in Latin America, with a significant presence in television broadcasting, digital content, and print media. The company produces a wide range of content, including news, entertainment, and sports programs, catering to millions of viewers and readers.

Key challenges faced by Globo included:

- Managing large volumes of multimedia content
- Ensuring real-time content delivery
- Maintaining high availability and performance

## 3. Technology Adopted: MySQL Enterprise Edition

MySQL Enterprise Edition is a comprehensive, commercial-grade version of MySQL that provides advanced features for enterprise applications.

Key features of MySQL Enterprise Edition:

- Advanced security features to protect sensitive content data
- High availability with replication and backup solutions
- Real-time performance monitoring and tuning
- Scalability to handle large datasets and concurrent users

## 4. Implementation Process

The implementation of MySQL Enterprise Edition in Globo's content development platform involved several stages:

### 4.1. Planning and Analysis

Globo conducted a detailed analysis of its existing database infrastructure and identified the need for a more scalable and reliable solution to handle growing content demands.

### 4.2. Migration to MySQL Enterprise Edition

The migration process involved transferring existing content databases to MySQL Enterprise Edition. Globo

ensured data integrity and minimal downtime during this transition.

### **4.3. Integration with Content Management Systems**

Globo integrated MySQL Enterprise Edition with its content management systems to enable seamless content creation, storage, and distribution. This integration improved the efficiency of its content workflows.

## **5. Benefits Achieved**

By adopting MySQL Enterprise Edition, Globo achieved several significant benefits:

### **5.1. Enhanced Scalability**

MySQL Enterprise Edition provided the scalability needed to handle large volumes of multimedia content and a growing user base.

### **5.2. Improved Performance and Reliability**

The solution ensured high performance and availability, allowing Globo to deliver content in real-time without interruptions.

### **5.3. Enhanced Data Security**

With advanced security features, MySQL Enterprise Edition helped Globo protect sensitive content data from cyber threats.

### **5.4. Cost-Effective Solution**

By leveraging a commercial open-source solution, Globo reduced its overall database management costs while maintaining enterprise-grade performance.

## **6. Challenges Faced**

During the implementation process, Globo encountered several challenges:

- Data migration complexities
- Ensuring compatibility with existing content management systems
- Training staff to manage and maintain the new database system

## **7. Conclusion**

The case study of Globo's adoption of MySQL Enterprise Edition demonstrates the importance of scalable and reliable database solutions in content development. By leveraging MySQL Enterprise Edition, Globo enhanced its content workflows, improved performance, and ensured data security, enabling it to meet the growing demands of its audience.

## **8. References**

1. Globo Official Website: [www.globo.com](http://www.globo.com)
2. MySQL Documentation: [www.mysql.com](http://www.mysql.com)